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U. S. ARMY CONCEPT TEAM IN VIETNAM  
APO 143, San Francisco, California

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AS

(1) Employment of OV-1 (Mohawk) Aircraft

in Support of Counter-Insurgency Operations (C)

Short Title: (6) MASCO (U).

(S)

(1) MONTHLY TEST REPORT NUMBER 4,

343690

16 January 1963 - 15 February 1963.

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SUBJECT: Monthly Test Report Number 4 -- Employment of OV-1 (Mohawk) Aircraft in Counter-Insurgency Operations (16 January - 15 February 1963) (C)

TO: See Annex L

1. (C) General.

a. Purpose of the test:

To test and evaluate the 23rd Special Warfare Aviation Detachment (Surveillance) (23d SWAD) under field combat conditions to determine the adequacy and suitability of organization, equipment, missions, doctrine, tactics, procedures, and techniques for conducting counter-insurgency operations.

b. Test concept:

(1) Field tests are being conducted in the Republic of Vietnam (RVN) to support actual operations as specified by COMUSMACV. During the test period the test unit has supported the II ARVN (Army of Vietnam) Corps.

(2) Deployment of the 23d SWAD through 14 February 1963 was:

(a) One flight team (two aircraft and 16 personnel) at Qui Nhon in direct support of the 9th Division.

(b) 23d SWAD (-) at Nha Trang. Missions were:

1 Reinforcement of the flight team at Qui Nhon.

2 Surveillance of the coastal railway in II Zone. On 21 January, railway surveillance was extended to include the railroad in Quang Ngai Province.

3 General support as directed by II ARVN Corps.

(3) On 15 February, a flight team (two aircraft and 18 personnel) moved to Quang Ngai to provide direct support to the 25th Division. Team equipment includes an AN/TFQ-7 photographic laboratory, giving the team a complete film processing capability.

(4) Thus, on 15 February the 23d SWAD was disposed with the Detachment (-) (two aircraft) at Nha Trang, a flight team (two aircraft) 100 miles to the north at Qui Nhon, and a second flight team (two aircraft) at Quang Ngai, 200 miles north of Nha Trang.

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SUBJECT: Monthly Test Report Number 4 -- Employment of OV-1 (Mohawk) Aircraft in Counter-Insurgency Operations (16 January - 15 February 1963) (C)

c. Significant events affecting the test:

On 5 February, two replacement Mohawks were ferried to Nha Trang from Cubi NAS, Philippine Islands, bringing the 23d SAD to its authorized strength of six aircraft.

2. (C) Test progress.

a. The test is considered to be 80% complete.

b. A summary of significant statistical data follows:

	<u>16 Oct-</u> <u>15 Nov</u>	<u>16 Nov-</u> <u>15 Dec</u>	<u>16 Dec-</u> <u>15 Jan</u>	<u>16 Jan-</u> <u>15 Feb</u>	<u>TOTAL</u>
Number of combat support missions	87	170	201	133	591
Photo	44	28	39	32	143
Observation	10	62	44	31	147
Railroad reconnaissance	31	44	43	67	185
Night illumination	2	3	2	3	10
Leaflet drop	0	5	2	0	7
Convoy observation	0	7	1	0	8
Helicopter observation	0	21	14	0	35
Search and rescue	0	0	56	0	56
Number of photographic prints delivered	5700	3130	8130	7818	24,778
Number of times artillery adjusted	3	7	7	0	17
Number of aircraft hit by ground fire	1	1	2	0	4
Number of hits (total)	2	2	2	0	6
Number of times hostile ground fire directed at aircraft observed by crew	3	4	0	1	8

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SUBJECT: Monthly Test Report Number 4 -- Employment of OV-1 (Mohawk)  
Aircraft in Counter-Insurgency Operations (16 January -  
15 February 1963) (C)

	16 Oct- 15 Nov	16 Nov- 15 Dec	16 Dec- 15 Jan	16 Jan- 15 Feb	TOTAL
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Number of times hostile fire on aircraft reported by ground units in addition to above	2	0	1	0	3
Number of times defensive fire delivered	3	4	0	1	8
Aircraft lost (unknown cause)	0	0	1	0	1
Average number of aircraft in working fleet (assigned minus FDP & crash)	5.25	5	4.7	4.7	
Average number of aircraft available daily	3.7	4.6	4.4	4.2	
Percent of working fleet available	70%	92%	94%	89%	
Total flight hours	337	383	461	393	1574
Average daily flight hours by unit	10.9	12.8	15.0	12.7	
Hours per aircraft in working fleet (monthly rate)	64	77	98	84	

3. (U) Content and format of report.

a. Content: Much material published in Monthly Reports Numbers 1, 2, and 3 will not be repeated here. These monthly reports are intended to indicate progress and to provide for an orderly collection of data to be included in the final test report.

b. Format: Annexes A through G cover the seven test objectives. Annexes H through K contain back-up data. Distribution of the report is shown at Annex L.

4. (C) References.

a. USMACV letter, 29 September 1962, subject: "Test Plan, AO-1 (Mohawk) Aircraft for Province/Sector Surveillance in Support of Counter-Insurgency Operations (C)."

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SUBJECT: Monthly Test Report Number 4 — Employment of OV-1 (Mohawk) Aircraft in Counter-Insurgency Operations (16 January - 15 February 1963) (C)

b. USMACV message, J3 4213 (1962), subject: "Operational Employment of the 23rd Special Warfare Aviation Detachment (Surveillance)"

c. DA letter, 6 November 1962, AGAM-P (M) 381 (31 Oct 62) DCSOPS, subject: "Army Troop Test Program in Vietnam (U)."

d. Test reports, Army Concept Team in Vietnam, subject: "Employment of OV-1 (Mohawk) Aircraft in Support of Counter-Insurgency Operations (C)" —

(1) Monthly Test Report Number 1, 30 November 1962.

(2) Monthly Test Report Number 2, 31 December 1962.

(3) Monthly Test Report Number 3, 31 January 1963.

12 Incl  
List on next page

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SUBJECT: Monthly Test Report Number 4 -- Employment of OV-1 (Mohawk)  
Aircraft in Counter-Insurgency Operations (16 January -  
15 February 1963) (C)

LIST OF ANNEXES

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2. ANNEX B -- Objective 2 (Suitability of Mohawk for surveillance)
3. ANNEX C -- Objective 3 (Activities detected visually and by photographs)
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9. ANNEX I -- Extracts from aviators' debriefing forms.
10. ANNEX J -- Night illumination techniques and procedures.
11. ANNEX K -- SOP for detached flight team.
12. ANNEX L -- Distribution of report.

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SUBJECT: Monthly Test Report Number 4 — Mohawk

ANNEX A -- Objective 1 (Area surveillance)

1. (C) Objective.

"To determine the results obtained by providing continuous surveillance to a limited area; i.e., reduction in VC incidents, restrictions to VC movements, increase of RVNAF (Republic of Vietnam Armed Forces) response and effectiveness."

2. (C) Discussion.

a. Test activities relevant to this objective have been conducted in the same manner and in the same two test areas as described in Monthly Test Report number 2: Binh Dinh Province (Area A) and Trans - Vietnam Railway, II Zone (Area B).

b. The table below shows the number of incidents in Binh Dinh Province for a 12-month period. The priority effort of the 23d SWAD surveillance operations was in this province during November and December 1962 and January 1963.

	F	M	A	M	J	J	A	S	O	N	D	J
Propaganda	12	4	10	2	15	26	19	9	6	17	17	22
Commo Sabotage	0	0	1	9	0	6	1	3	8	3	2	0
Harassments	11	18	16	14	35	58	37	23	36	47	26	20
Atrocities	15	19	11	7	32	14	15	9	18	25	16	12
Ambushes	4	5	1	3	4	4	2	4	5	3	10	4
Monthly Totals	42	46	39	35	86	108	74	48	73	95	71	58

(1) The Binh Dinh Province incident rate has declined during the past two months. It may be assumed that 23d SWAD operations contributed to this decline, but the relative weight which may be given to aerial surveillance as compared with other contributing factors is not yet clear. A detailed analysis is being made of the time and place of incidents. These data will be correlated with the daily areas of Mohawk operations in an attempt to more clearly establish the incident/air surveillance relationship.

c. Railway incidents.

The table below compares railway incidents in the three RVN Security zones from June 1962 through January 1963.

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SUBJECT: Monthly Test Report Number 4 -- Mohawk

ANNEX A — Objective 1 (continued)

	<u>II Zone</u>	<u>I Zone</u>	<u>III Zone</u>
June	13	10	2
July	26	7	1
August	10	3	2
September	12	5	1
October	10	6	1
November	9*	13	1
December	3*	13	1
January	8*	3#	0

\* = Full months of Mohawk reconnaissance.

# = Beginning 21 January, Mohawks conducted daily railway reconnaissance in Quang Ngai Province, I Zone.

Although the number of railway incidents in II Zone increased in January, it remained below the average for the last seven months of 1962. A detailed analysis is being made to determine the correlation between times and areas of surveillance and times, locations, severity and types of incidents. Results of the analysis will be included in the final report.

3. Findings.

a. VC incidents in Binh Dinh Province have declined in the last two months, but the specific contribution of Mohawk surveillance to the decline is not clear.

b. There were more railway incidents in II Zone in January (8) than in December (3), but less than the 1962 seven-month average (12).

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SUBJECT: Monthly Test Report Number 4 -- Mohawk

ANNEX B -- Objective 2 (Suitability of Mohawk for surveillance)

1. (C) Objective.

"To determine the suitability and feasibility of OV-1 aircraft for tactical area surveillance."

2. (U) Discussion.

No new data pertaining to this objective are included in this report.

3. (U) Findings.

None.

ANNEX B

ANNEX B

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SUBJECT: Monthly Test Report Number 4 — Hanoi

ANNEX C — Objective 3 (Activities detected visually and by photographs)

1. (C) Objective.

"To determine the nature of insurgent activities which can be detected by visual and photographic means."

2. (C) Discussion.

a. Two photographic are attached.

(1) Photograph C-1, taken on 7 February in Quang Ngai Province, shows a VC emplacement for an automatic weapon. Although the emplacement was unoccupied at the time this photo was taken, an O-1 aircraft received fire from this position two days earlier. The position is located in an area which has been under insurgent control since World War II. This open, uncamouflaged emplacement is sited on a bare knot with excellent observation of three valleys which radiate from it.

(2) Photograph C-2, taken on 18 January in an insurgent-controlled section of Kontum Province, shows a cable over a river. II Corps intelligence personnel believe this cable is used to assist VC ferry operations.

b. Extracts from aviators' debriefing forms (Annex I) contain examples of visual detection of insurgent activity.

3. (U) Findings.

No change from Report Number 2.

4. (C) Attachments.

Photograph C-1

Photograph C-2

ANNEX C

ANNEX C

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SUBJECT: Monthly Test Report Number 4 -- Below.

Photograph C-1, ANNEX C -- VC automatic weapons emplacement.



Photo C-1  
ANNEX C

Photo C-1  
ANNEX C

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SUBJECT: Monthly Test Report Number 4 -- Iishawk

Photograph C-2, ANNEX C -- Cable over river.



Photo C-2  
ANNEX C

Photo C-2  
ANNEX C

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SUBJECT: Monthly Test Report Number 4 -- Mohawk

ANNEX D -- Objective 4 (Doctrine, procedures, tactics, and techniques)

1. (C) Objective.

"To determine the adequacy and validity of current US Army doctrine, procedures, tactics, and techniques for employment of OV-1 type aircraft in a tactical area surveillance role and to further develop doctrine, procedures, tactics, and techniques for counter-insurgency operations."

2. (C) Discussion.

a. Responsiveness.

(1) Monthly Reports 2 and 3 contained numerous references, by advisors to supported units, to the responsiveness of the 23d SIVAD. In order to measure responsiveness, an analysis was made of all mission requests received by the Qui Nhon flight team from 23 November 1962 to 10 January 1963. A breakout of requests and action taken follows:

Total mission requests received	175
Requests canceled	26
Because of weather	18
Aircraft not available because of higher priority missions	5
By requester	3
Missions flown	149
Service flights	6
Pre-planned railway recons	14
Aircraft lost	1
Aborted, camera malfunction	1
Flown by aircraft from Nha Trang	2
Records incomplete	9
Missions flown for the 9th Div	116

(a) Approximately 10% of the missions requested were not flown because of weather conditions. The period analyzed was during

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SUBJECT: Monthly Test Report Number 4 -- Mohawk

## ANNEX D -- Objective 4 (Continued)

the northeast monsoon; clouds frequently obscured mountain peaks and ridges in the area of the flight team's operations.

(b) In nine instances missions were flown but, due to omissions in records or unreconcilable discrepancies, accurate data could not be obtained. These missions are accounted for as "records incomplete" in the table above.

(2) The following table is a breakout of the 9th Division mission requests by time interval between receipt of the request and the time the mission was requested to be flown. Shown on the right side of the table is the performance of the flight team in meeting the times specified.

REQUESTS <u>Time in hours from receipt of mission request</u>	PERFORMANCE			
	<u>Number of missions requested to be flown in each time bracket shown in left column</u>	<u>Flown on or prior to time requested</u>	<u>Flown one hour later than requested</u>	<u>Flown more than one hour later than re- quested</u>
0-1	43 (37%)	36	4	3
2-3	29 (25%)	23	5	1
4-6	10 (9%)	10	0	0
7-12	2 (2%)	2	0	0
13-24	31 (26%)	27	0	4
Over 24	1 (1%)	1	0	0
TOTALS	116	99 (85%)	9 (8%)	8 (7%)

(a) Considering first the left hand (request) side of the table above, the significant points are that in more than one third of cases, the flight team was asked to fly the mission in one hour or less; and in 62% of all missions, the reaction time requested was three hours or less.

(b) One of the purposes of this objective is to collect data on the value of quick reaction and immediate response vis-a-vis the recognized advantages of centralized employment of Mohawk type aircraft. It is pertinent to note that only about 25% of the missions given to the

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SUBJECT: Monthly Test Report Number 4 - Mohawk

ANNEX D -- Objective 4 (Continued)

Mohawk flight team were received in time to have been considered and allocated at an evening planning conference -- if that procedure had been used for mission assignment. It is apparent that the response inherent in decentralized operation and direct support mission assignment is geared to the actual requirements of the supported unit. It is possible that some of the missions assigned to the flight team on short notice should have been planned and requested much earlier, particularly if they were not of an immediate or urgent nature. But the realities of the situation must be considered, i.e., the relative inexperience of many ARVN officers in staff planning, and the propensity of ARVN commanders to withhold planning guidance until the last possible moment to eliminate security leaks.

(c) The "performance" side of the table, above, indicates that the Mohawk flight team performed 85% of all missions at the hour requested. An additional 8% were performed one hour late, and the final 7% were flown two hours or more later than requested. From available records it is not possible to reconstruct the specific reasons for each tardy mission performance. General reasons for late performance include: weather delays; aircraft out on other missions; maintenance or refueling delays; and, no doubt, human error.

b. Techniques and procedures.

(1) Night illumination techniques and procedures used by the 23d SWAD are recorded at Annex J.

(2) The 23d SWAD SOP for the duties and responsibilities of the flight team leaders of detached flight teams is attached at Annex K.

3. (C) Findings.

a. 62% of the Mohawk missions flown in support of the 9th Division (23 Nov 62 - 10 Jan 63) were requested three hours or less in advance of the time the missions were to be flown; 37% of all missions were requested with one hour or less lead time.

b. The 23d SWAD flight team performed 85% of 9th Division missions at the time requested; 8% were flown one hour late; and 7% were flown two hours or more later than requested.

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ACTIV-AM  
Monthly Test Report Number 4 -- Mohawk

ANNEX L -- Objective 5 (Adequacy of equipment and personnel)

1. (C) Objective.

"To determine the adequacy of equipment and personnel to support tactical area surveillance operations."

2. (C) Discussion.

Previous reports have pointed out the need for an increased photographic processing capability in the 23d SWAD. On 13 February an additional AN/TRQ-7 photographic laboratory was issued to the unit. This facility is now with the flight team at Quang Ngai.

3. (U) Findings.

None

ANNEX E

ANNEX E

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**ACTIV-AM**

Monthly Test Report Number 4 -- Mohawk

ANNEX F -- Objective 6 (Changes in TOE and technical and training literature)

1. (C) Objective.

"To recommend necessary changes to the TOE (Modified), training and technical literature released on the results of the operational evaluation."

2. (U) Discussion.

None

3. (U) Findings.

None

ANNEX F

ANNEX F

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ACTIV-AM  
Monthly Test Report Number 4 -- Mohawk

ANNEX G -- Objective 7 (Logistical problems)

1. (C) Objective.

"To determine logistical problems".

2. (U) Discussion.

a. During the past 30 days the average daily availability of the 23d SWAD aircraft has been 8% of the working fleet. No aircraft were CDP during the period. Graphs of daily aircraft availability and flight hours are attached (Graphs G-1 and G-2).

b. Parts usage for the 1742.9 hours flown since the unit arrived in the RWN is shown in Report G-3 attached.

3. (U) Findings.

No change from Monthly Test Report Number 2.

4. (U) Attachments.

Graph G-1 -- Aircraft availability

Graph G-2 -- Daily flight hours

Graph G-3 -- Parts usage

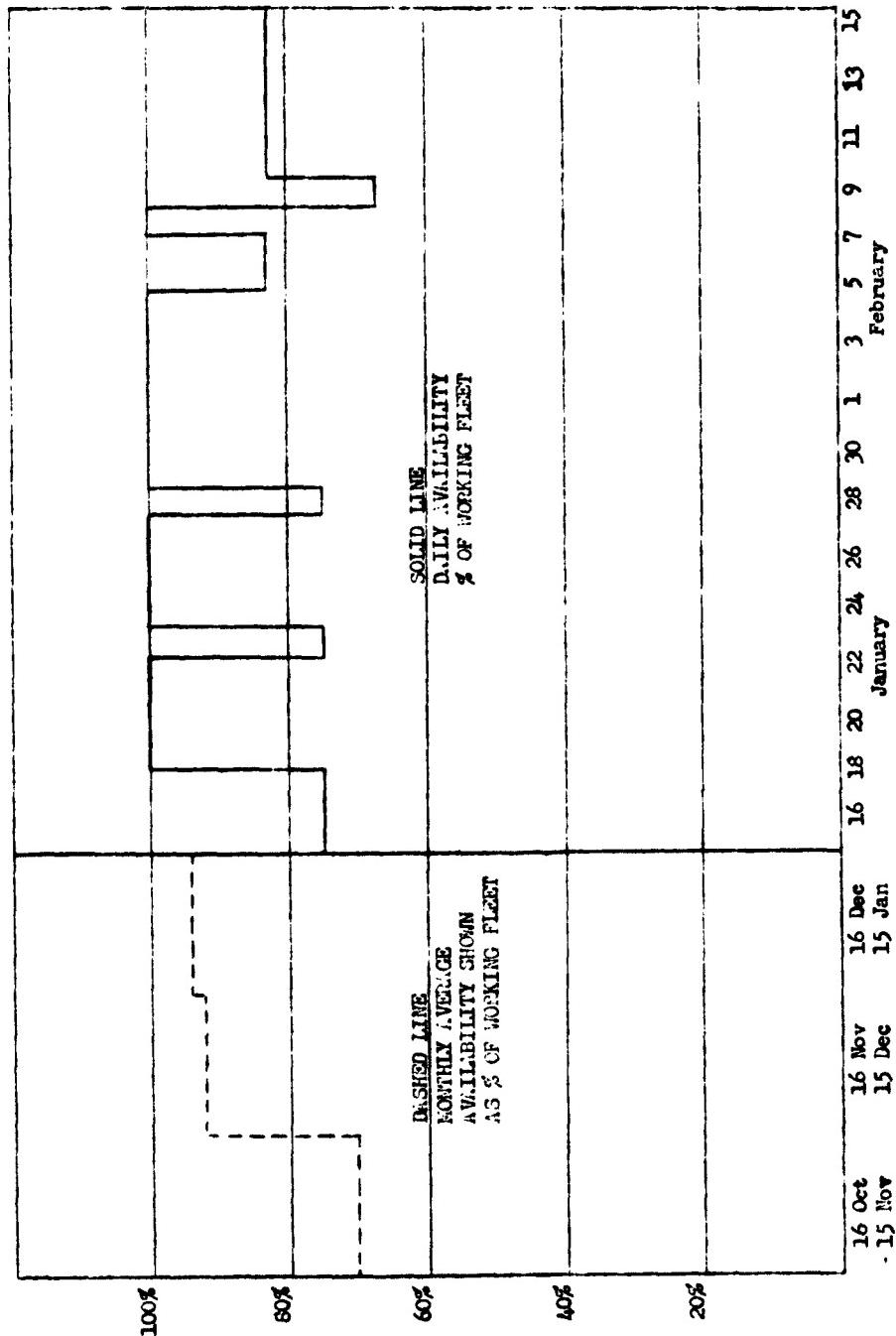
ANNEX G

ANNEX G

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ACTIV-AN  
Monthly Test Report Number 4 -- Mohawk

Graph G-1, ANNEX G -- Aircraft availability.

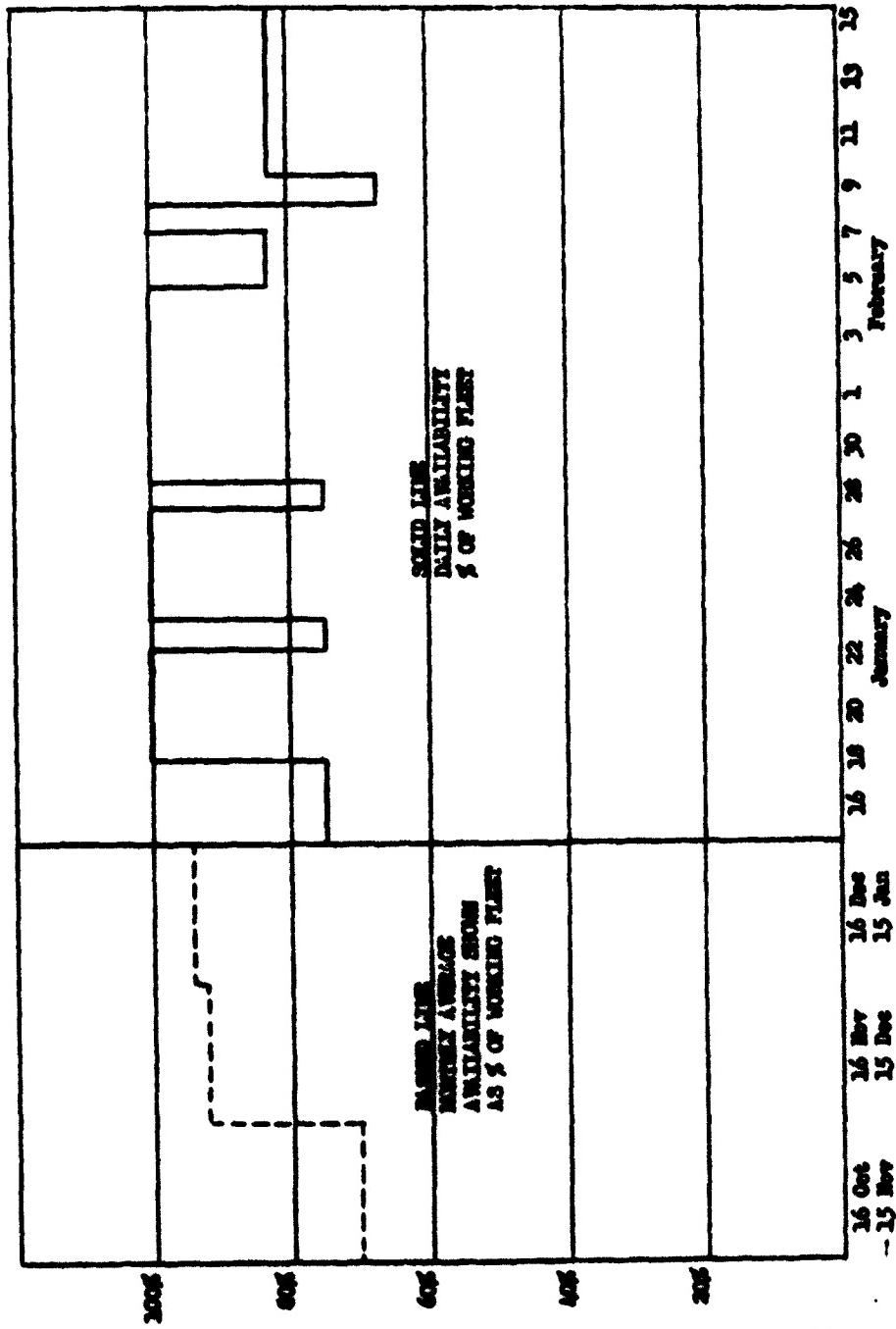


Graph G-1  
ANNEX G

Graph G-1  
ANNEX G

**ACTIV-AM**  
Monthly Test Report Number 4 — Nohank

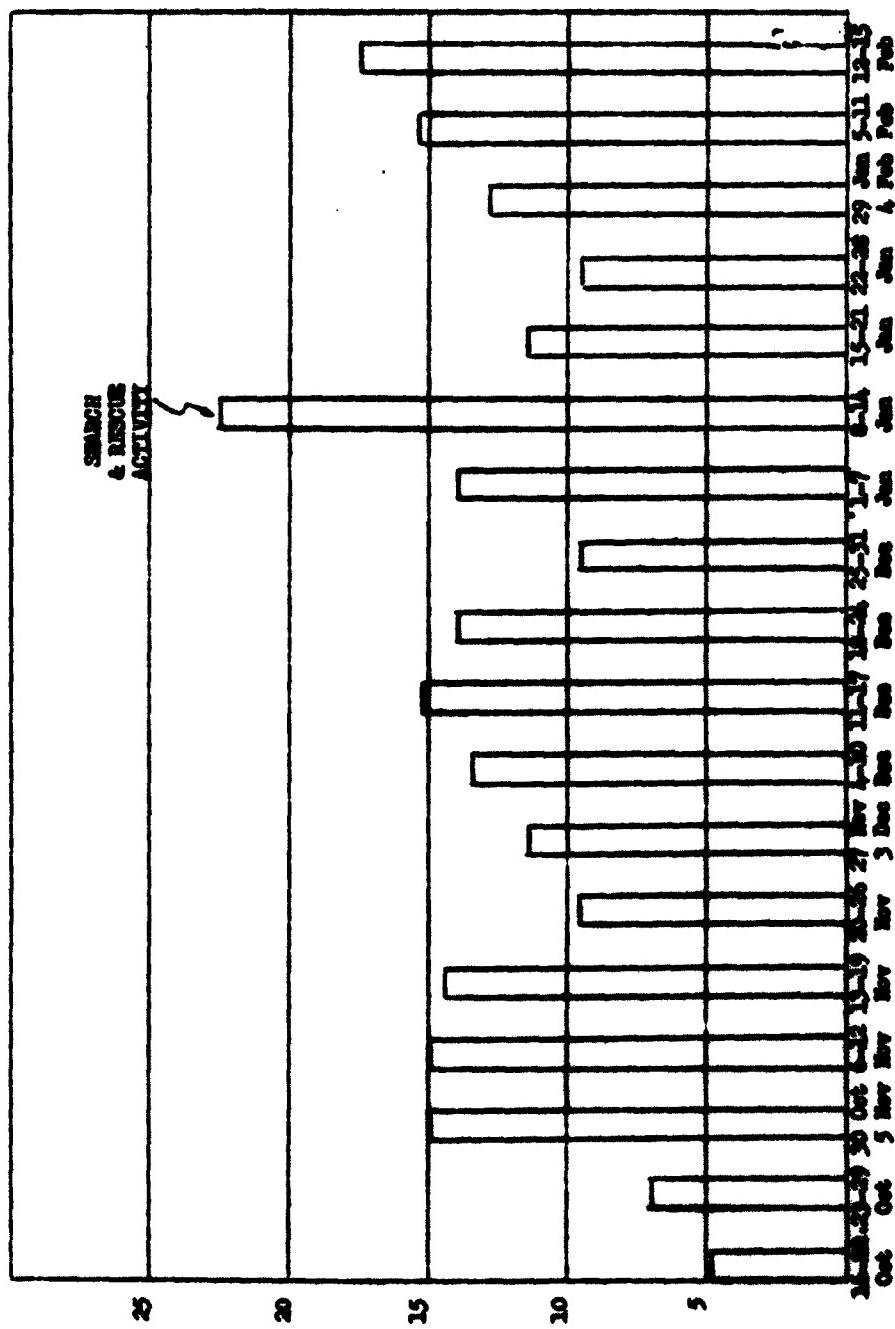
**Graph G-1, ANNEX G -- Aircraft availability.**



**Graph G-1**  
**ANNEX G**

ACTIV-AM  
Monthly Test Report Number 4 — Mohawk

Graph G-2, ANNEX C — Daily flight hours (average per week).



Graph G-2  
ANNEX C

Graph G-2  
ANNEX C

## ACTIV-AM

Monthly Test Report Number 4 — Mohawk

## Report G-3, ANNEX G — Repair parts usage.

1. Since the test unit arrived in the RW in September 1962, the six assigned JOV-1C aircraft have flown a total of 1742.9 hours.

2. Parts usage during that period is shown below. The list does not contain common hardware items or replacement parts for the aircraft crash-damaged on 19 November 1962.

<u>Part No.</u>	<u>NOMENCLATURE</u>	<u>AMOUNT</u>
2935-772-5610	Oil cooler	10
2620-772-6468	Tires, main	42
2620-288-0247	Tires, Nose	5
1630-893-1102	Brake Assemblies	5
1630-821-2697	Brake Linings	765
1560-796-7074	Tank, Oil	4
2915-784-5472	Fuel Boost Pumps	7
1650-775-3835	Hydraulic Pumps	3
1650-772-0374	Main Landing Gear Cylinders	6
1630-797-8608	Park Brake Valve	2
1650-776-1958	Speedbrake Selector Valve	15
2915-775-7814	Fuel Controls	5
2840-712-0390	Engine	6
AN6235-1A	Fuel Control Filters	80
2915-970-8907	Fuel Control Filter Kits	10
4330-227-3274	Oil Filter	50
AN6235-4A	Hydraulic Filter	60
6685-898-1744	WT. Harness (Thermocouple)	6
6685-778-8777	Transmitter, Hydraulic	4
6220-553-8892	Tachometer, Generator	6

AOVV-AM  
Monthly Test Report Number 4 -- hawk

Report 0-3, ANNEX G -- Repair parts usage (continued)

<u>Part No.</u>	<u>DESCRIPTION</u>	<u>AMOUNT</u>
2840-778-2276	Nut, External Wrenching	14
2840-970-8908	Engine Inspection Kit	17
1560-445-6252	Rear View Mirror	3
2840-739-6906	Reduction Gear Kit	1
1650-772-3424	Nose Gear Door Actuator	2
1560-770-6012	Glass, Windshield R/H	2
1560-774-5027	Glass, Windshield L/H	2
2840-790-3648	Gear Box	1
1610-671-1092	Prop Control Assy	4
1680-887-9183	Canopy Actuator	2
2915-795-9852	Pump, Rotary Power Driven	3
1005-300-5561	Gun, Charger, HCO-AE P/N 871134	3
	Harness Assembly P/N 200-54185	2
1610-799-9020	Prop Dome Seal	40
2840-475-6965	Oil Filter Seal	90
2840-475-6966	Oil Filter Seal	90
2840-475-6967	Oil Filter Seal	90
5330-245-3835	Fuel Control Filter Seals	90
5330-265-1091	Fuel Control Filter Seals	90
5330-265-1088	Fuel Control Filter Seals	90
1630-797-8604	Brake Disc	8
	Release bomb rack, AERO 7B-1 DNC # 60A12208	2
		1

**AOTIV-AM**  
**Monthly Test Report Number 4 — Mohawk**

**Report G-3, ANNEX G — Repair parts usage (continued)**

<u>I.S.M.</u>	<u>NOMENCLATURE</u>	<u>AMOUNT</u>
	Combination rack, Bomb & rocket-AERO 15C, DWG #58A154RL	1
	Combination Rack, Bomb AERO 65L	1
5841-543-1328	Control Amplifier - APN-22	6
6720-893-4272	Photo System Unit	3
6615-486-8072	Gyroscope, ASN-35	4
5831-682-2703	ICS Control C-1611/A1C	7
6605-098-2703	Gyroscopic, (?U-1)	2
6760-753-5155	Lens Cone LA130A	1
6760-753-5157	Lens Cone LA131A	5
5895-681-9868	Control APX 44	1
5955-577-7784	Crystal	1
6125-568-5821	Dynamotor DY 107/AR	1
6720-899-7911	Control Panel (Camera)	1
5895-677-1882	RT 494/APX-44	3
6605-604-5662	Amplifier Compass (NA-1)	1
5826-505-0645	CV-265/ANH-30A	2
5826-519-6963	R-1021/ANH-30D	2
5821-543-1890	RT-349/A ABC-55	3
5821-503-2586	AN/ABC-44	1
5826-519-6967	AN/ANH-59	1
5826-752-2908	PP-2792	3

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ACTIV-AM  
Monthly Test Report Number 4 -- Mohawk  
ANNEX H -- Railway security reports.

ATTACHMENT

Report H-1	Excerpts from January Monthly Report, Rail Security Advisor, II Zone, 9 Feb 63.
Report H-2	Rail Incident Report, Rail Security Advisor, II Zone, 21 Jan 63.
Report H-3	Rail Incident Report, Rail Security Advisor, II Zone, 10 Feb 63
Report H-4	Rail Incident Report, Rail Security Advisor, II Zone, 16 Feb 63.

This page regraded  
UNCLASSIFIED when separated  
from classified inclosures.

ANNEX H

ANNEX H

**CONFIDENTIAL**

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**ACTIV-AN**  
Monthly Test Report Number 4 -- Mohawk

**Report H-1, ANNEX H -- Excerpts from rail advisor's monthly report.**

RAIL SEC ADV  
STUDIES & ANALYSIS BR  
OMT DIV, USASMC, MAAG  
SAIGON

9 FEB 63

1. (K) Number of incidents in zone:
    - a. Rails removed or separated
    - b. Mining of train
    - c. Telegraph line cut
    - d. Train derailment
    - e. Attack on treewalker

\* Three rail removals or separations resulted in train derailments. Incident of 16 Jan 63 is reflected in these figures (See attached report of Khan Hoa intelligence advisor and incident report by this advisor).

\*\* One train derailment was result of VC mine.

\*\*\*\* One telegraph line removal was in conjunction with train derailment.

For the month of January 1963, a total of 8 incidents.

<u>DAMAGE</u>	<u>WEAPONS OR EQUIP USED</u>	<u>PILFERED</u>	<u>BURNED</u>
172 Meters of rail	None	6 firecrackers	None
2 Locomotives		2 red flags	
17 Rail cars		1 RR Horn	
1 Railroad car load freight		1 Lug wrench	

**Report N-1**

Report N-1  
Annex H

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ACTIV-AM  
Monthly Test Report Number 4 — Mohawk

Report H-1, ANNEX H -- Excerpts from rail advisor's monthly report (continued)

**K**

**GW**

KIA: Unknown WIA: Unknown

KIA: 14\* WIA: 22\*

\*All KIA result of train  
derailment and all civilians.  
\*All WIA result of train de-  
railment, 2 military, and  
20 civilians.

2. ~~XXXXXXXXXXXX~~

3. (K) Accomplishment during month:

Rail reconnaissance by 23d SW Ave Det initiated in Quang Ngai  
province on a daily basis as of 21 January 1963.

4. ~~XXXXXXXXXXXX~~

5. (K) Recommendations:

~~XXXXXXXXXXXX~~

d. That the Mohawk aircraft be authorized to utilize its  
ordnance in support of the NRSS.

~~XXXXXXXXXXXX~~

6. ~~XXXXXXXXXXXX~~

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EDITORIAL NOTE: The symbol "(K)" stands for "KIN," a Vietnamese security  
classification equivalent to CONFIDENTIAL.

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Report H-1  
ANNEX H

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Report H-1  
ANNEX H

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ACTIV-AM  
Monthly Test Report Number 4 — Mohawk

Report H-2, ANNEX H -- Rail incident report, 21 January 1963.

**PRIORITY**

PR: RAIL SEC ADV, II ZONE, NHA TRANG

TO: RAIL SEC ADV  
STUDIES & ANALYSIS BR  
OAT DIV, USASEC, NAAG  
SAIGON

INFO: SR ADV IIICORPS  
ATTN: G-2, ADVISOR  
PLEIKU

Train Nr 2334, unescorted, North-bound, passenger and freight, derailed by mine action at 1050 hours, 21 Jan 63 at KM 1056 (RR 883/905). No info on injuries, dead, or VC attack available.

Information received here around 1500, advisor notified 1605, Mohawk over train at 1707, unable to establish contact with ground troops in area.

Aerial photos viewed at 1915 reveal a stack of what appears to be seven cars immediately to rear of locomotive. Pile consists of three small freight cars and four large ones, one large freight car is laying on it's side. Entire train appears to have been derailed. Locomotive is on wheels but is off tracks.

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ANNEX H

Report H-2  
ANNEX H

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ACTIV-AM  
Monthly Test Report Number 4 -- Mohawk

Report H-3, ANNEX H — Rail incident report, 10 February 1963.

PRIORITY

FR: RAIL SEC ADV, II ZONE, NHA TRANG

TO: RAIL SEC ADV  
STUDIES & ANALYSIS BR  
OMT DIV, USASEC, MACV  
SAIGON

INFO: SR ADV, II CORPS  
ATTN: Q-2, ADV  
PLEIKU

(U) Freight, escorted, southbound, train Nr 2333/Mined at KM 1026.2 (BR 885/885), 1400 hours, 10 Feb 63. Seven cars derailed, four on their sides, one twisted across roadbed, two with one set of wheels each off tracks. No VC attack. No weapons, or equipment lost. Five injured by derailment.

(C) Mohawk arrived over train at 1445 on routine rail reconnaissance. MRSS escort identified location of six VC and requested aircraft to take them under fire. Request made three times. Escort informed Mohawk that VC were not firing on aircraft. Under existing rules of engagement aircraft could not deliver air strike.

Report H-3  
ANNEX H

Report H-3  
ANNEX H

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ACTIV-AM

Monthly Test Report Number 4 — Mohawk

Report H-4, ANNEX H -- Rail incident report, 16 February 1963.

PRIORITY

PR: RAIL SEC ADV, II ZONE, MRSS

TO: RAIL SEC ADV  
STUDIES & ANALYSIS BR  
COM DIV, USASEC, MACV  
SAIGON

INFO: SR ADV, II CORPS  
ATTN: G-2, ADV  
PLIUKU

(U) Train Nr 27, passenger, escorted, southbound, mined at KM 1134.7 (BQ 864/954). 152200 Feb 63. No VC attack. Security flatcar, two wheels off tracks, chief train car, two wheels off tracks, two rails twisted, seven crossties damaged. Original info received Nha Trang by IR-20 relay; stated only that train had been mined and derailed.

(U) Mohawk requested 2320, off 2338, over area 0005.

(X) Remarks: Low level air reconnaissance of area BQ 954/797 to BQ 840/062, morning 14 Feb 63, revealed five foot patrols in area plus what appeared to be two platoon size units operating on or near rail right-of-way. Train Nr 2342 had air cover this area afternoon 14 Feb 63. Routine Mohawk rail reconnaissance II Zone trackage, 14 Feb 63.

Above area had static air surveillance (L-28), morning & afternoon of 15 Feb 63, during the time important trains passed, plus routine Mohawk reconnaissance mission.

Nature of incident indicates mine hastily placed; pressure activated instead of electrically. First pressure mine this MRSS Sub-Zone since 6 Nov 62.

Report H-4  
ANNEX H

Report H-4  
ANNEX H

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ACTIV-AM  
Monthly Test Report Number 4 -- Mohawk

## ANNEX I — Extracts from aviators' debriefing forms.

The following comments were extracted from aviators' debriefing forms prepared by US pilots upon completion of each mission. A variety of Mohawk missions are described. In some cases the comments have been edited slightly for clarity.

### 1. Mission Nr: Q3-1-32 Time: 191110 - 191300 Jan 63

Mission: Proceed to area of operations of 30th Artillery and perform observation as requested by that unit.

Proceeded to target area at 1110 hours and contacted 30th Arty. Was directed by radio to proceed to ARVN Infantry unit near vicinity of RR 580758. On passing the ridge I was informed by FM radio that a VC machine gun had fired on us from the vicinity of some small huts. The description of the machine gun location was obtained and a pass was made over the area during which the source of the ground fire was located by the observer and confirmed as VC. We were fired on again during this pass. We then made four runs with machine guns. An American came on the radio, identified himself, and reported the last two runs were right on target. He then identified his location as in the valley at the base of the ridge I had just fired on. After expending all ammo, returned to Qui Nhon, landing at 1300.

### 2. Mission Nr: Q3-1-35 Time: 201455 - 201635 Jan 63

Mission: Lay photography of Target area Q3-1-32

Observed and photographed target fired on in Mission Nr Q3-1-32. Photographed suspected VC village at 580736 (ANKEE 15SW). Flew top cover for Mohawk 09. No targets detected. Reported to FSCC on return.

### 3. Mission Nr: 63-1-102 Time: 211210 - 211540 Jan 63

Mission: Day Visual and photo reconnaissance of suspected VC emplacements. Observed five personnel in the open at coordinates ZA 140560. Anti-helicopter ditches and stakes discovered at the same coordinates. Believe personnel to be VC work party preparing anti-helicopter defenses. Photos taken. Located possible VC buildings and activities.

### 4. Mission Nr: Q3-1-558 Time: 220935 - 221110 Jan 63.

Mission: Visual observation of area NE of Bong Son.

Saw numerous roads and fox holes in area B-2 at coordinates RR 930942 (famholes); RR 930940 (roads). Observed numerous people on road 20 km South of Bong Son. Reported suspected VC company at RR 786055 to FSCC.

ANNEX I

ANNEX I

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ACTIV-AM

Monthly Test Report Number 4 -- Hawk

ANNEX I — Extracts from debriefing forms (continued).

5. Mission Nr: Q3-1-59A Time: 290900 - 291110 Jan 63

Mission: Observation of quadrilateral area in Phu Yen Province.

Observed numerous new structures vicinity of BR 445340. Several new buildings being built under trees. Observed hogs, cattle, and chickens but no human life. Approximately 100 new structures in area, all well camouflaged. Observed one building alone. It appeared to be larger than the average house. Suspected storage house of some sort.

6. Mission Nr: Q3-2-66 Time: 01000 - 011145 Jan 63.

Mission: Photography reconnaissance initially; mission changed in the air to railroad reconnaissance.

Proceeded north on photo recon. After taking two photos, we were diverted by Hawk Scout on an immediate mission to inspect a suspected railroad derailment north of Tuy Hoa. Hawk 09 and 02 proceeded down the railroad and found the trouble. A rail had been bent outward. There was a train stopped on the south side. They had seen the rail and stopped. We contacted the crew on the ground and they were starting the repairs. We orbited the area while they repaired the tracks and remained over the area until the first train passed safely.

7. Mission Nr: Q3-2-96 Time: 090755 - 071005 Feb 63

Mission: Day visual and photographic reconnaissance of suspected VC troop concentrations.

Observed numerous well-used paths leading to lone building at coordinates BR 280610. Made photographs and delivered for target analysis.

8. Mission Nr: Q3-2-96 Time: 070845 - 070935 Feb 63

Mission: Day visual reconnaissance of suspected VC hiding place.

Sighted approximately 10 suspected VC at coordinates BR 9078. All suspected insurgents ran for cover as the aircraft approached. No known fire received. Reported concentration to FSCC at end of mission.

9. Mission Nr: Q3-2-129 Time: 131335 - 131530 Feb 63.

Mission: Day visual reconnaissance of suspected VC hiding area.

At 1345 observed smoke from suspected cooking fires at coordinates BR 964556 and BR 955565. No personnel sighted.

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Page 2

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ACTIV-AM  
Monthly Test Report Number 4 -- Mohawk

ANNEX I -- Extracts from debriefing forms (continued).

5. Mission Nr: Q3-1-594 Time: 290900 - 291110 Jan 63

Mission: Observation of quadrilateral area in Phu Yen Province.

Observed numerous new structures vicinity of BR 445340. Several new buildings being built under trees. Observed hogs, cattle, and chickens but no human life. Approximately 100 new structures in area, all well camouflaged. Observed one building alone. It appeared to be larger than the average house. Suspected storage house of some sort.

6. Mission Nr: Q3-2-66 Time: 01000 - 011145 Jan 63.

Mission: Photography reconnaissance initially; mission changed in the air to railroad reconnaissance.

Proceeded north on photo run. After taking two photos, we were diverted by Hawk Scout on an immediate mission to inspect a suspected railroad derailment north of Tuy Hoa. Hawk 09 and 02 proceeded down the railroad and found the trouble. A rail had been bent outward. There was a train stopped on the south side. They had seen the rail and stopped. We contacted the crew on the ground and they were starting the repairs. We orbited the area while they repaired the tracks and remained over the area until the first train passed safely.

7. Mission Nr: Q3-2-96 Time: 050755 - 071005 Feb 63

Mission: Day visual and photographic reconnaissance of suspected VC troop concentrations.

Observed numerous well-used paths leading to lone building at coordinates BQ 280610. Made photographs and delivered for target analysis.

8. Mission Nr: Q3-2-96 Time: 070845 - 070935 Feb 63

Mission: Day visual reconnaissance of suspected VC hiding place.

Sighted approximately 10 suspected VC at coordinates BQ 9078. All suspected insurgents ran for cover as the aircraft approached. No known fire received. Reported concentration to FSCC at end of mission.

9. Mission Nr: Q3-2-129 Time: 131335 - 131530 Feb 63.

Mission: Day visual reconnaissance of suspected VC hiding area.

At 1345 observed smoke from suspected cooking fires at coordinates BR 964556 and BR 955565. No personnel sighted.

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**ACTIV-4M**  
**Monthly Test Report Number 4 -- Mohawk**

**ANNEX I -- Extracts from debriefing forms (continued).**

**10. Mission Nr: Q3-2-135 Time: 151900 - 151930 Feb 63**

**Mission: Night visual and photo reconnaissance.**

**Arrived target area at 1915 hours. Dropped four flares. Observed automatic weapons fire directed at aircraft from Vic CR 075110. No hits on aircraft. Reported activity to FSCC for possible air strike.**

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ACTIV-AM  
Monthly Test Report Number 4 -- Mohawk

ANNEX J -- Techniques and procedures for night illumination

1. (C) General.

This annex records the standard procedures and techniques for night illumination used by the 23d SMAD to support counter-insurgency operations in the RW.

2. (U) Description of the flare and mounting system.

a. The Mark VI, Model 6 aircraft parachute flare is the only illumination pyrotechnic which has been used by the 23d SMAD. The flare weighs 30 pounds, is 36 inches long and 5 $\frac{1}{2}$  inches in diameter. It produces 1,000,000 candle power for a duration of three minutes while descending by parachute at 450 feet per minute.

b. The flare is equipped with a delay fuse which must be preset for an ignition delay between 300 and 12,000 feet after release from the aircraft. When released from the aircraft the fuse is activated by a nylon cord lanyard. At the completion of the set delay the ignition charge of black powder is ignited by the fuse; the expanding gases produced by this charge force the auxiliary parachute from the flare case and also ignite the 17.4 pounds of illuminant (pyrotechnic candle). The auxiliary parachute opening shock separates the parachute tube and the pyrotechnic candle from the flare case. The weight of the candle then pulls the parachute from the case and it opens, allowing the case to fall free and suspending the ignited flare. The free-falling parachute case presents a minor hazard if employed over friendly troops. The best illumination is provided with the flare 3000 feet to 1500 feet above the ground. Therefore, release altitude is normally established at 3000 feet plus the fuse setting. For example: If the fuse is set at 300 feet, the release should be made at 3,300 feet above the target for best results. This also assures burn-out of the flare before ground contact; this is necessary to prevent the burning flare from starting a ground fire.

c. The flare is mounted on the bomb racks by means of two metal support bands which are shipped with the flare. There are also two metal steady bands against which the sway braces of the bomb racks rest. Slight modification of the standard Mohawk sway braces is necessary for proper security. This may be accomplished by manufacture of smaller sway braces or by placing a small strip of wood between the sway braces and the flare. One flare may be mounted on each of the four AERO 150 bomb racks and one on each of the two AERO 65A-1 racks. Flares are mounted with the fuse end of the container toward the front of the aircraft.

3. (U) Aiming and dropping the flare.

a. After the flare is mounted on the rack, the metal cover at the fuse end is removed. The fuse is given the desired setting by rotating the thumbscrew indicator to the desired delay, indicated as 3C (300 feet), 2C (2000 feet), etc. The thumbscrew is then tightened so that the pointer penetrates the flare case enough to stay firmly in the set position. The

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ACTIV-AM  
Monthly Test Report Number 4 -- Mohawk

ANNEX J -- Night illumination (continued)

nylon lanyard and is equipped with a small piece of metal called an "arming plate". This arming plate is inserted between the nose arming clips in the forward portion of the bomb rack. The safety screw located in the center of the fuse section is removed just prior to flight. Caution should be used to insure that the nose-tail arming switch in the cockpit is in the safe position so that if the flare should be inadvertently dropped, it would fall safe.

b. To employ the flare the following actions are taken in sequence: On the control panel in the cockpit set the stepping switch to the desired station; select either nose, or nose and tail arming; on the bomb-rocket switch, select bombs; insure armament circuit breakers are "in"; turn master arm switch "on". Upon completion of these steps the flare is ready to be released. Flare release is accomplished by depressing the stores release button on the pilot's control stick.

c. Electrical stepping has been disconnected on all 23d SWAD aircraft. Therefore, for each drop the stepping switch must be rotated manually to the desired external stores station. By selecting the proper setting the flares may be released singly, in pairs, or all at once.

4. (C) Pre-mission preparations.

a. On pre-planned missions, detailed briefings are conducted. However, pre-planned flare missions have been the exception rather than the rule. Most missions are received on an immediate basis, allowing minimum time for preparation. Minimum essential briefing information to allow accomplishment of the mission must include:

- (1) target description and location;
- (2) results desired; and
- (3) weather.

b. At least one aircraft is pre-flighted and mounted with flares for standby each night. A duty crew is on alert in the operations hut. Because of these preparations, sorties can be airborne within 15 minutes of receipt of request from a supported unit, and can be over any target within a 100 N.M. radius within 45 minutes.

5. (C) Navigation to the target.

a. In underdeveloped areas of the RWN, ground lights are very scarce at night and piloting is extremely difficult except on clear nights with a bright moon.

b. One of the best methods of navigation has proven to be dead reckoning (time-distance) combined with some sort of friendly signal from the target area (signal flares, fires, or voice radio signal).

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ACTIV-AM  
Monthly Test Report Number 4 -- Mohawk

ANNEX J — Night illumination (continued)

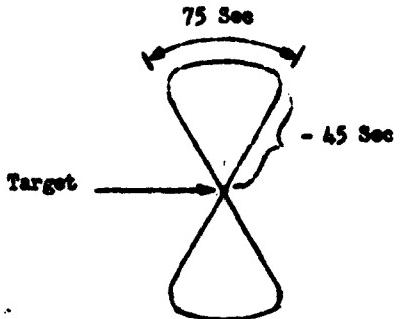
c. The FM homing capability of the Mohawk has been used effectively to provide navigational guidance to the target area. This is an excellent method but may not be usable if other radios are transmitting on the same frequency.

d. When available, radar vector is without doubt the most effective means of target location. The 23d SWAD has no organic radar. GCI sites located in the area have been used on those missions in which the target was within radar range of the sites. In many instances, however, radar is masked by mountains between the GCI site and the target area.

e. Electronic navigation aids (VOR and NDB) in the II Corps area are completely unsatisfactory because of unreliability and insufficient accuracy for this type mission.

6. (C) Technique for providing continuous illumination.

a. Single aircraft: Experience has shown that the best flight pattern to be a figure eight with the target at the center. Ninety-second legs are flown with standard rate 225° turns. Each time the target is crossed, approximately 2-3/4 minutes will have elapsed between flares, giving at least 15 seconds overlap of illumination by each succeeding flare. Pattern will look like this:



(1) The altitude (3000 feet absolute above the fuse setting) must be decided upon and the fuse set prior to the flight. Factors considered in determining flight altitude are terrain elevation, cloud cover, hazards to flight, and requirements for visual observation of the illuminated area by the aircraft crew.

(2) Release point and pattern must be adjusted to allow for wind drift.

(3) A Mohawk carrying six flares can provide continuous illumination for approximately 15 minutes.

b. Two aircraft: When two aircraft are employed to provide illumina-

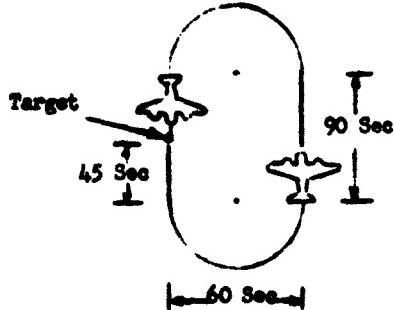
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ACTIV-AM  
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**ANNEX J -- Night illumination (continued)**

nation over the same point, a rectangular pattern is used with 90-second legs and a standard rate 180° turn at each end to complete the pattern. The pattern is located with the target at the midpoint of either leg, and the aircraft are spaced on opposite sides of the pattern to provide a flare release approximately every 2½ minutes. By this method, approximately 30 minutes of continuous illumination can be provided.



c. If illumination for longer than 30 minutes is required, additional aircraft should be designated to relieve aircraft on station when their flares are expended. Because of the difficulty of maintaining relative stations at night, this method is preferred over the use of three or more aircraft in a single pattern.

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**ANNEX K -- 23d SWAD SOP for detached flight team leaders.**

The Standing Operating Procedure reproduced below was published by the 23d SWAD to govern the operation of detached flight teams. It outlines command, control, and administrative procedures employed by detached teams.

**STANDING OPERATING PROCEDURE**

**Duties and Responsibilities of Flight Team Leader of TDY Flight Team**

When a flight team is TDY to and in direct support of a unit, many of the normal administrative and operational functions of mission receipt, planning, and data-recording become a direct responsibility of the flight team leader.

The flight team leader acts as the Liaison Officer with the supported unit and is responsible for the employment of his flight team at the request of the supported unit commander. Consideration must always be given to service to the supported unit, maximum utilization of capabilities and aircraft, and safety throughout all operations.

The flight team will normally work in conjunction with the G3 or S3 Advisory Group of the supported unit and receive all mission requests through them. This affords channelization of requests from all unit sources and allows establishment of priorities by one source when the requirement exists. This central contact will assure continuity of operations and maximum utilization in support of the using unit.

All missions will be received for and recorded on the unit mission request form attached as Inclusion 1. Type missions not noted on the form should be recorded on the back of the form. All documents connected with mission request (i.e. request in Vietnamese, translations, overlays, maps, etc.) will be attached to above stated request forms.

All missions received will be logged out and in on the daily mission log. This log sheet will be a continuing running log utilizing a block of mission numbers assigned to the flight team. The flight time column will be the actual flight time as logged by the pilot in the form 12. The pilot's name assigned the mission will be recorded in an additional column at the end of the remarks section. (Inclusion 2).

Every mission flown will have an aviator's debriefing form (Incl 3) completed immediately upon termination of the mission. Every effort will be made to record all observations and actions in minute detail. Pilots and/or observers debriefing by intelligence or operations personnel will be noted on the debriefing form.

Data entered on the mission request form, daily mission log, and debriefing form will be accurate and complete. Brevity is secondary to completeness.

In addition to the above requirements, the flight team leader will prepare daily a narrative summary of the daily operations of the flight team.

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**ANNEX K -- 23d SWAD SOP (continued)**

This should include a detailed description of any significant mission, incident, or happening. Other suggested points to cover would be any maintenance problems pertaining to aircraft, cameras, vehicles, radios, weapons, or personnel problems.

Any significant happenings or observations, especially railway incidents and/or accidents will be reported immediately to Operations, Nha Trang. Reports of this type will be made at the discretion of the flight team leader and always in the best interest of operations and security. Aircraft hits, defensive fires delivered, missing, wounded or dead will be reported immediately.

Daily, by 0800 hours, the flight team leader will call the following report of the preceding day's activities to unit operations (Goldfinch 908):

Total aircraft assigned \_\_\_\_\_  
Total aircraft flyable \_\_\_\_\_  
Total crews assigned \_\_\_\_\_  
Total crews flyable \_\_\_\_\_  
Total missions flown \_\_\_\_\_  
missions by type \_\_\_\_\_  
Total number of sorties \_\_\_\_\_  
Total flight time by A/C \_\_\_\_\_

The above forms and reports are necessary due to the test status of this unit and the requirement to have an accurate record of the unit's activities. These reports and figures are included in reports to II Corps, MACV and USAID-V and are used in test reports on this unit by ACTIV (Army Concept Team in Vietnam). The value derived from flight team reports is directly proportional to the thoroughness and accuracy with which they are completed.

In some cases, in the past, it has been difficult to refer to photo missions by mission number because the camera data plate did not reflect the proper mission number when photos were taken. To preclude this, the camera data plates will be filled out for all missions where cameras are carried, whether it is a photographic mission or not. These data plates will be filled out as follows:

23d Avn Dt.  
A/C Number  
Mission Number

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**ANNEX K — 23d SWAD SOP (continued)**

Personnel delivering film from photo missions to Nha Trang for processing will have correct mission number assigned for reporting to operations. This will afford proper documentation of film for filing and future reference.

The flight team leader is responsible for all phases of the operation while the flight team is detached. Major maintenance difficulties should be referred to the unit as soon as possible. Requirements for parts or resupply of usage items and ordnance should be programmed in advance of actual need and the requirement made known to operations so delivery can be made to coincide with the need.

The flight team will maintain one officer at the operations desk during all operational periods. Periods during which this is not practical should be reported to unit operations.

Air-ground communications will be maintained in so far as possible with all unit aircraft in the operational area. FM frequency will be 42.0 primary and 45.0 secondary. UHF frequency will be 334.6 MC primary and 242.4 MC secondary. These frequencies will be monitored by aircraft from this unit unless operational missions dictate other frequencies for accomplishment of mission.

Utilization of this unit's aircraft will be for operational missions and training in conjunction with operational missions. Shipment of items to the unit will be by cargo aircraft except in operational emergencies. If delivery by cargo aircraft is not possible, deliveries should be scheduled in conjunction with operational missions. Priority or urgency of requirement will dictate any deviation from this policy.

Nothing written in this SOP should prevail over good common sense and a sound decision based on the facts available.

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Major

Inclusions:

- 1 - Mission Request Form  
2 - Daily Mission Log  
3 - Aviator's Debriefing Form } SEE NOTE BELOW

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/s/Shadow  
SWADCOM  
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ANNEX K -- 23d SWAD SOP (continued)

EDITORIAL NOTE:

Inclosures 1 and 2 are not included here. A sample Mission Request Form was included with Monthly Report Number 3 as Inclosure 1, Annex O; a sample Aviator's Debriefing Form was Inclosure 6 to that Annex.

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**Final 2 to SGP  
Final 1, ANNEX K**

DATE:

Incl 1, ANNEX K

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ANNEX L -- Distribution of report.

<u>Addressee</u>	<u>No. of copies</u>
Commander, US Military Assistance Command, Vietnam (attention Director, JNG-V)	15
Commander-in-Chief, US Army Pacific	5
Commanding General, US Army Combat Developments Command	50
Commanding General, US Continental Army Command	5
Commanding General, US Army Materiel Command	5
Commanding General, US Army Support Group, Vietnam	20
Chief, Military Assistance Advisory Group, Vietnam (attention Chief, Army Section)	20
Deputy Chief of Staff for Military Operations, Department of the Army	10
Deputy Chief of Staff for Logistics, Department of the Army	5
Deputy Chief of Staff for Personnel, Department of the Army	5
Chief of Research and Development, Department of the Army	5
ACTIV Liaison Officer, ODCSOPS, Department of the Army	5